Birth of the Vizsla

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Author Note

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Abstract

The Vizsla (Smooth), also known as a Hungarian Pointer, Magyar Vizsla, Magyar Pointer, or Yellow Pointer, is a beautiful, noble-looking, intelligent, and versatile breed excelling at various tasks presented to them. Vizsla may become a hunter, show prospect, competitive or non-competitive performance sport athlete, or companion. Such versatility is due to hundreds years of selective breeding and betterment of the breed, its traits and abilities. This paper looks all the way back to origins of the Vizsla.

Birth of the Vizsla

Vizsla is a truly versatile dog excelling in various tasks assigned to them (Figure 1). Originally developed to assist humans with hunting, a modern Vizsla does well in a show ring, various performance sports, and simply being a human companion (Figure 2). They are loyal to their humans, and are gorgeous, intelligent, and highly trainable.

Previously published classic books (Kolossy, 1942; Boggs, 1973, 1982, & 2000), Gottlieb, 1992 & 1999, Coffman, 1991 & 2001) about the Vizsla breed remain to be must-reads for anyone wanting to own a Vizsla; these books also cover some of the early history of the breed. However, Koshyk (2011), who provided a great overview of pointing Continental breeds, pointed out that there were no previous attempts “to put [Vizsla’s origin] into a historical context.” Therefore, the purpose of this paper is to research the origins of the Vizsla breed, add new findings that have emerged over the past twenty or so years, and put them into a historical context.

Figure 1

Bronze Sculpture of a Vizsla by A. Tölgyesi Poós, 2016, O. Moshynska, personal collection.

Figure 2

Bronze Sculpture of a Male and Female Vizslas by A. Tölgyesi Poós, 2017, O. Moshynska, personal collection.

Time of Dog Domestication

Thanks to new evidence, we now know that dog domestication occurred much earlier than previously thought, sometime between 20,000 and 40,000 years ago (Botigue et al., 2017). This conclusion is based on the phylogenetic analyses of whole genome and Y-chromosome sequences estimating that dogs and wolves diverged genetically between 36,900-41,500 and

150,000 years ago (Butigue et al., 2017; Frantz, 2016; Lindblad-Toh et al, 2005; Oetjens et al, 2018; Pilot et al, 2018). While there were wolf remains and dens found (in both China and Europe) near human remains that were dated older than this identified time period, it is unclear whether this proximity was a coincidence or not. One of the oldest proofs of ancient human-canine relationship comes from Southern France's Chauvet Cave where 26,000-year-old footprints of a small child accompanied by a large wolf or a dog were discovered extending over a distance of 150 feet. (Sullivan, 2017) (Figure 3).

Figure 3

26,000 Year-Old Child Footprints Alongside Paw Prints, From https://www.ancient-origins.net/history/26000-year-old-child-footprints-found-alongside-paw-prints-reveal-oldest-evidence-human-021235. In the public domain. CC BY –NC.

This finding correlates well with the phylogenetic analyses of whole genome sequences estimating that further sub-division of dogs into Eastern (Asian) and Western (European and Middle Eastern) groups occurred between 17,000 and 24,000 years ago (Botique et al., 2017).

Other oldest evidences of human/canine relationship were found in Europe and were Paleolithic dog skulls such as 36,000-32,000 years-old “Goyet dog” (Goyet Cave, Belgium), 33,000 years-old “Altai” dog (Altai Mountains, Russia), 34,000-22,000 years-old “Gravettian dogs” (Moravia, Czech Republic), and wolf-like fossils from hunter-gatherer sites across Europe such as 26,000-27,000 years old Predmosti (Czech Republic), 23,000-27,700 years old Kostenki-8 (Russia,), 22,000-24,000 years old Kostenki-1 (Russia), and 14,700 years old “Bonn-Oberkassel dog” (Germany) fossils (Germonpre et al., 2009 & 2014; Ovodov et al., 2011; Thalmann et al., 2013; Botigue et al., 2017). Compared to the oldest confirmed evidence of presence the Dingoes in Australia (Madura Cave in Western Australia) found to be only between 3,348 and 3,081 years old (Balme et al., 2018). Of special interest is the 7,000 years-old Libyan Sahara rock painting of a person and a domesticated wolf or a dog (Hinocinte, n.d.).

Another interesting piece is the 8,000–9,000 years old rock art at Shuwaymis (Saudi Arabia) (Figure 4) that shows a dog believed to be an ancestor of a modern Canaan dog that roams the deserts of the Middle East and is believed to originate in Israel (Guagnin et al., 2018). Some of these pictured thirteen dogs are leashed to a bow-hunter, hunting a lion (Guagnin et al., 2018). That could indicate that these ancient people bred dogs that had already adapted to hunting in the desert.

Figure 4

Dogs Leashed to a Hunter Pictured on a Schuwaymis Rock, From M. Guagnin, et al., 2018.

https://phys.org/news/2017-11-wall-saudi-arabia-earliest-depiction.html

These discovered art pieces suggests that humans in the Middle East were able to train and control dogs more than eight thousands years ago. Humans became herders (based on livestock bones found at Jubbah and pictures of cattle, sheep, and goats on the art at Shuwaymis images) about 7,000 years ago and have started hunting with dogs (based on 156 art pieces found at Shuwaymis and 193 - at Jubbah) (Grimm et al., 2017) about 8,000-9,000 years ago. The art piece (Figure 4) could be the very first evidence of the dogs pictured attached (leashed) to a human (Guagnin, 2018). About the same time, Romans wrote instructions dividing dogs into war dogs (venatici), sighthounds (celeries), and scent hounds (sagaces) (Rogers, 2005). Based on this evidence, we may conclude that about 8,000-9,000 years ago, humans trained, domesticated, dogs to perform different tasks for them.

The domestication process was accompanied by animals' anatomical changes such as appearance of floppy ears and white spots, shortening of skulls and widening of their snouts, and development of smaller bodies and curled tails (Ballard & Wilson, 2019). Proofs of domestication come from detailed analysis of dog images (e.g., animals painted are of a

medium-to-large size, with pricked ears, short snouts, and curled tails) (Grimm et al., 2017). Interestingly, these signs of domestication are mostly absent in the Australian Dingo, free-living on an island with no or little interaction with humans (Ballard et al., 2019). Comparison of the wolf's cranial growth trajectories, the Dingo's and of the pointing dogs showed that the Dingo's was more similar to the wolves than to the pointing dogs' (Geiger et al., 2017).

One of the first art works demonstrating dog's feelings is probably a marble statue created by a Roman artist and dated to the 2nd century BC (Rogers, 2005). Another astonishing art piece from the 2nd century is a realisting hunting scene, which shows humans using dogs to hunt animals, is a part of of a floor mosaic from Zliten in Tripolitania (Cornell & Matthews, 1982).

The thousands-year long domestication process was attempted to be re-created in the sixty-year long experiment on silver foxes that was started in Siberia in 1959 (Ratliff, 2011). Silver foxes were bred based on their behavioral responses when approached by a human (Dugatkin, 2018). Tameness of these foxes was accompanied by their ability to follow humans' eyes, appearance of curly tails, floppy ears, and changes in their facial structures by developing dog-like appearances.

Therefore, based on numerous evidence related to the time of dog domestication, first dogs appeared between 36,900 and 41,500 years ago, domestication occurred about 20,000 to 40,000 years ago, and hunting with dogs started about 8,000-9,000 years ago. Equally important is to identify the place of dog domestication.

Place of Dog Domestication

The majority of scientists agree that dogs originated from gray wolves, but the place of dog domestication is highly disputed. Scientists agree, the domestication should have occurred North of the equator (as there are no wolves South of the equator), and where the native wolves are smaller (50 – 60 pounds) in size (Rogers, 2005). Three theories currently exist on the location of this domestication. These include Asian, European, and dual origin theories.

Asian Origin Theory of Dog Domestication

East, Middle, and Central Asia origin is the originally proposed theory (Von Holdt et al., 2010; Shannon et al., 2015, Pang et al., 2009; Wang et al., 2013; Ding et al., 2012; Brown et al., 2011; Sacks et al., 2013; Savolainen et al., 2002; Thalmann et al., 2013). Vaysse et al (2011) used selection mapping to reconstruct the geographical distribution of ancestral dogs and came up with the conclusion that the most recent common ancestor of existent dogs originated in Asia. Drusjkova et al (2013) study of an ancient DNA of a 33,000-year dog found in Altai in Southern Siberia is the closest to an ancient wolf. This followed by gradual (East to West) expansion of dogs along two migration routes from Asia (1) to the Middle East and (2) to Europe through Central and West Asia. Asian origin for domestic dogs is approximately 15,000 years ago (Savolainen et al, 2002; Thalmann et al., 2013). However, the previously identified time of domestication was about 20,000 to 40,000 years ago, much earlier than proposed by Asian origin theory's 15,000 mark.

Dual Origin Theory of Dog Domestication

The discovery of the importance of the Y-chromosome DNA, mitochondrial DNA, ancient DNA, microsatellites, haplogroups, and non-coding DNA regions allowed for the development of new, dual, or genetics-based theory. The analysis of intra-clade (within a clade or a haplogroup) distribution, as opposed to inter-clade (between clades or haplogroups), supports the dual origin theory (Deguilloux et al, 2009). An organism's group of alleles that are inherited together forms a haplotype; group of haplotypes with an ancestor sharing a single-nucleotide polymorphism forms a haplogroup. There are 38 haplotypes found in dogs. Genetically defined 23 clades (or haplogroups) tend to group (cluster) dogs with similar traits, such as those bred for strength (e.g., Boxers, Bulldogs, Boston Terriers), for herding (e.g., Sheepdogs, Corgis, Collies), for hunting (e.g., Retrievers, Spaniels, Setters), and so on (Parker et al, 2017). The cluster analysis (based on microsatellites) shows hybridization between the groups while the phylogenic

analysis (based on single nucleotide polymorphisms) shows a single placement of each breed in any group. There are three main dog clades, or haplogroups A, B, and C, believed to emerge in Asia about 15,000 years ago, while the haplogroup D sought to originate in Europe (Deguilloux et al., 2009; Botigue, 2017). Haplogroup C found largely represented in Western Europe (current territory of France, Sweden, Italy) during Neolithic era (Deguilloux et al., 2009), while haplogroups A and B were presented in Western Europe around 10,000 BC and haplogroup C – around 15,000 BC. However, only 5% of modern European dogs have haplogroup C and 70 % of them have haplogroup A (Deguilloux et al, 2009), suggesting that sometime between the Late Neolithic and present days, the haplogroup C was replaced by haplogroup A in Europe (Botigue, 2017). According to Frants et al (2016), the dual origin hypothesis suggested dogs were domesticated separately and independently, in Europe and Asia, with the Asian dogs migrating later on and eventually replacing the European dogs. Marinov et al (2018) studied mitochondrial DNA and demonstrated native Bulgarian hunting dogs (both long- and short-haired) have a dual origin, with their predecessors coming from both ancient East Eurasian (who carried haplogroup A and/or B) and West Eurasian (who carried haplogroup C).

European Origin Theory of Dog Domestication

As the domestication was started much earlier (20,000 to 40,000 years ago) than as supported by dual origin theory migration (4,000-11,000 years ago), Pilot et al (2015) suggested this was a secondary rather than primary expansion. Pilot et al (2015) found that Eurasian free-breeding populations were genetically distinct from modern European breeds and probably native to their respective locations. The authors have concluded that this could have caused the replacement of dog lineages that were already there. An interesting observation made was about mixed-breed dogs only constituting a small fraction of the entire population of free-breeding dogs. Interestingly, ancient dog remains found in Europe were of larger wolf-sized

dogs, while those found in the Middle East were smaller in size, further supporting independent domestication theory (Deguilloux et al, 2009). European ancient dogs' DNA is believed to start changing towards the modern dog DNA approximately 5,000 years ago, supporting a late expansion from Asia theory. It is also about the same time when a haplogroup mutation occurred in human DNA.

Genetic evidence based on the analysis of ancient DNA, however, contradicts the dual origin theory and supports European ancestry (Thalmann et al, 2013). Genome sequencing of an Early and End Neolithic dog remains found in Germany demonstrated a shared ancestry with modern dogs, pointing to dog domestication in Europe about 20,000 to 40,000 years ago (Botigue et al, 2017). Analysis of dog remains found in Spain were dated 17,000 years old (Deguilloux et al, 2009). DNA analysis of an Upper Palaeolothic's jaw-bone from the Bonn-Oberkassel (Germany) site's dog remains are dated 14,700 years (Benecke, et al, 1987). According to Parker et al (2004), most modern breeds have predominantly European ancestry. Frantz et al (2016) reported the oldest (confirmed) dog remains found in Europe dated 40,000 to 20,000 years old, while those found in East Asia dated to be about 12,500 years old.

Analysis of genomic and mitochondrial DNA from modern dogs suggest East or South Asia, the Middle East and Central Asia as the region of dog origin, while ancient mitochondrial DNA and archaeological data point towards a European center of dog domestication (Thalmann et al, 2013). It has been recently concluded (Thalmann et al, 2013; Botigue, 2017) that studying modern samples alone is insufficient, and that ancient samples from Central and Southeast Asia, and the Middle East are needed to further clarify the exact details of dog domestication and evolution.

Supporters of both, dual origin and European origin, however, agree that Sporting dogs have originated in Europe. Rogers (2005) believes that Greyhounds and Mastiffs have the Indian wolf as their ancestor, Spitz dogs – the North American wolf, Shepherd dogs, Terriers,

Chows, Oriental Toy dogs – the Chinese wolf, and Sporting Dogs – the European wolf. The wild Asian Grey Wolf is believed to be the ancestor of the undomesticated Pariah dog, which in turn, is the ancestor of the Dingo (Ballard, 2019). According to von Holdt et al (2010), the Basenji, Basset Hound, and Borzoi haplotype signatures were found to be closer to the Middle Eastern wolves, while the Miniature Pinscher, Greyhound, and Whippet – to the European wolves.

Regardless of the exact domestication location, dogs formed 17,000 to 24,000 years ago were genetically distinct Eastern and Western groups (Botique, 2017). Ancient European dogs' DNA sequences are predominantly haplogroups A, C, and D; however, modern European dogs' sequences are largely haplogroups A and B. Thalmann et al (2013) suggested that European hunter-gatherers and their interactions about 18,800 to 32,000 years ago with modern dog ancestors became the culmination point of the dog domestication.

Migration Routes of Canine DNA

Haplogroup A (or clade A) is found in modern breeds such as Basenji, Dingo, and Chinese Indigenous dogs (Thalmann et al, 2013). Genome-wide Single Nucleotide Polymorphism (SNP) analysis has also grouped the Alpine Dingo with African Basenji, Afghan Hound, Egyptian Saluki, Greyhound, and Whippet into one group (Wang, 2013). The A1a haplogroup includes the majority of German Shepherds, Golden Retrievers, Border Collies, Scottish Terriers, Irish Wolfhounds, and Vizslas (Embark, n.d.). The A1a haplogroup, though found in many village dogs and is widely distributed, is indigenous to European villages (Embark, n.d.). Duleba et al (2015) has determined that subclades A2a, A2b, A3, A4, A5, B2a and C1b have an East Asian distribution, while A1a1, A1b1, A1b2, B1a1a, B1a1, C1a2, C1a4, C2a2, C2a3 have a European distribution.

The common maternal (analysis of mitochondrial DNA) haplotypes found in Vizslas (among about 90 dogs studied) are A234 (Shannon et al, 2015) and A315, and the common parental (analysis of Y-chromosome) haplotype is H1a8 (Embark, n.d.; Shannon et al, 2015).

The A234 was observed in Vizslas (Shannon et al, 2015, Embark, n.d), Boxers, and Yorkshire Terriers and was also found in village dogs in South America, South Asia, and South Pacific (Embark, n.d). The A315 is found in Vizslas, English Setters, and English Springer Spaniels and is also found in village dogs in Turkey and Fiji. The Y-chromosome haplotype H1a8 (which is a part of the large A1a haplogroup) is common in village dogs around the World including South Asia and is seen frequently in Vizslas, Labrador Retrievers, and English Springer Spaniels (Embark, n.d.), and common (90% of tested animals within a breed) in Vizslas, Borzois, Pekingeses, Miniature Poodles, and Pulis (Shannon et al, 2015). Embark, a pioneer company in the dog DNA studies, has concluded that "the Vizsla breed is a grand Central European hunting dog with a *thousand year* history; all Vizslas come from this [A1a] lineage, suggesting that the first Vizslas were part of this lineage" (n.d.).

Two DNA samples from the Vizslas (Smooth), one – from a five-year old male (ID: 76352: vizslavilladatabase.com; Figure 5) and the other one – from a two-year old female (ID: 131724: vizslavilladatabase.com; Figure 6), were submitted to Embark for DNA analysis. The male's (Figure 5) maternal line (mitochondrial DNA) was identified as the one with the haplogroup A1e and the haplotype A234 and the parental line (Y-chromosome) was identified as the one with the haplogroup A1a and haplotype H1a8. As per Embark, "some of the wolves that became the original dogs in Central Asia around 15,000 years ago came from this long and distinguished line of male dogs. After domestication, they followed their humans from Asia to Europe and then… they took root in Europe, eventually becoming the dogs that founded the Vizsla breed 1,000 years ago" (n.d.). The Vizsla is a Central European hunting dog, and all male Vizslas [Vizslak] descend from this line." The A1e mitochondrial DNA was described by Embark as one of the rare dog lines until the past three hundred years.

Figure 5

Five-year Old Male Vizsla, O. Moshynska, 2018, personal collection.

The female's (Figure 6) maternal line (mitochondrial DNA) was identified as one with the A315 haplotype with the lineage, according to Embark (n.d.), originated in Central Asia 15,000 years ago and "found in ancient Bronze Age fossils in the Middle East and Southern Europe," becoming common in Europe after the end of the Bronze Age.

Figure 6

Two-year Old Female Vizsla, O. Moshynska, 2018, personal collection.

Both tested Vizslas carry DNA, specifically A315 maternal and A1a parental haplotypes, pointing towards the Vizsla most likely having Asia's origin.

Origin of Hungarians

The origin of Hungarians (or Magyars) remains to be controversial. The Vizsla breed history appears to go hand in hand with the history of Hungarians and the history of their language; therefore, looking at both may provide additional evidence. For example, recent DNA analysis studies of both Hungarians and their Hungarian (Magyar) Pointers have helped to shed light on the origins of both. Though the origin of Hungarians is a highly disputed topic, two, Asian and European, seem to be the mainly discussed theories.

Asian Origin Theory

The Asian origin is strongly supported by *The Illuminated Chronicle*, formerly known as *Vienna Chronicle* or *Chronicle of the Deeds of the Hungarians from the Fourteenth-Century Illuminated Codex*, written in 1358 (Bak & Veszpremy, 2018). Hungarians (also called Magyars

or Huns) sought to arrive from Central or South Asia (Wells et al, 2009; Sandor et al, 2015), possibly, from the Hindu Kush (Sandor, 2015) and may be descendants of Attila's Huns or Arpad's Huns (Geary et al, 2018). Interestingly, both of the Arpad's and of the Attila's emblems were the falcon, a black bird of prey, or turul bird, supporting the theory of them belonging to the same dynasty. Attila ruled from 434 to 453; he pushed his troops to Europe, to Bulgaria and Turkey, and later to Greece and Balkans (Thompson, 2011). According to *The Illuminated Chronicle* (Bak & Veszpremy, 2018), the Hungarians are believed to be descendant from the second son of Japheth, Magog, who "in the fifty-eight year after the flood" (p. 13) came to Evilah [Persia] and had two sons Magot (from whom were named the Magyars) and Hunor (from whom were named the Huns).

As per sacred Scripture (Bak & Veszpremy, 2018), Japheth, one of the sons of Noah, "possessed the regions North of the Taurus and Amanus [in Asia] mountains of Cilicia and Syria as far as the river Tanais [the river Don or Etul as it is called by Hungarians], which is in Scythia… and in Europe as far as Gades [Cadiz in Spain]" (p. 7) (Figure 7). Japheth's sons were Gomer (after whom were named the Galatians and the Gallici), Magog (after whom were named the Scythians), Mayday (from whom were named the Medes), Iavan (from whom were named the Greeks), Tubal (from whom were named the Spaniards), Moshoch (from whom were named the Cappadocians), and Tiras (from whom were named the Thracians).

Figure 7

Approximate Borders of Scythia in 100 BC, 2006. (From https://www.wikiwand.com/en/Scythian_languages#Media/File:Scythia-Parthia_100_BC.png) CC BY –NC.

The Scythians occupied Scythia from 11th century BC until 2nd century AD (Figure 7). Scythia's territory spread from Asia on the East (bordered by the Georgians), all the way to the river Don on the West, and Ethiopia on the South. Scythia included regions that have become parts of modern South-Eastern Ukraine, South-Western and Southern Russia (including Volga, Lake Baikal, and South-Ural regions) (Unterlander et al, 2017), Balkans, Eastern Poland, South-Eastern, Northern and Western Kazakhstan (from at least 8th century BC) (Sinor et al, 1990), Kyrgyzstan, Afghanistan, Eastern Iran, South-Western Pakistan, Northern Caucasus region, as well as parts of Tajikistan, Uzbekistan, Romania and Bulgaria. Scythia land was beautiful and its soil was fertile, according to *The Illuminated Chronicle* (Bak & Veszpremey, 2018). "It is beautiful with groves, woods and pasture, and there is *plenteous* abundance of animals of different kinds" (p. 21) where "gryphons make their nest, and the falcons which in Hungarian are called *kerecset* here bring forth their brood" (p. 23).

Huns stayed in Scythia (Figure 7) until 373 AD. According to *The Illuminated Chronicle* (Bak & Veszpremey, 2018), it was in 373 AD, when Huns chose their captain Bela, the son of Csele of the kindred of Szemeny, and made their entry into Pannonia. Pannonia, at the time of Huns' entry in 373 AD was a province of the Roman Empire (Figure 8). According to Cornell and Matthews (1982), it appears on 68-70 AD (p. 84) and 107 AD (p. 106-107) maps. These days, Pannonia is a part of Western Hungary, and parts of Austria, Slovakia, Croatia, Slovenia, Bosnia and Herzegovina. The entry of Huns into Pannonia, the fall of the Western Roman Empire, and establishment of Empire of the Huns (370-436 AD) is captured on the map published by Cornell and Matthews in 1982 (p. 209). From existing at the time one hundred and eight tribes, Huns choose their captains (Bela, Keve, Kadocsa, Etele, and Buda) and "determined to invade the western regions" (Bak & Veszpremy, 2018, p. 23). Each tribe split, some stayed while others went to invade other lands. Hungarians entered the lands of the Pechenengs, of the White Cumans, of the Suzdalians (Suzdal, capital of the Vladimir-Suzdal Principality), and of the Pannonia (Tulln, a town in Austria close to Vienna).

Figure 8

Pannonia, a province of the Roman Empire during the described period in 373 AD, was established in 9 AD (after the division of Illyria) and in 103 AD divided into Superior and Inferior. (*From* https://commons.wikimedia.org/w/index.php?curid=1243343*). In the public domain.*

Pannonia in the 1st century

Pannonia (Figure 8) was under the Roman Empire for more than four centuries (Engel, 2001). By 433 AD, some parts of Pannonia were under Huns. This is the period when falconers are mentioned for the first time in *The Illuminated Chronicle*. Around 430 AD, the whole of the Carpathian Basin became part of the Huns' Empire (Engel, 2001). The grandson of Magor, Attila, became the King of the Hungarians. Attila sent armies against and defeated the Danes, the Norsemen, the Frisians, the Lithuanians, and the Prussians, and sieged Pannonia, Pamphylia, Phrygia, Macedonia, and Dalmatia (Engel, 2001). Captains Bela, Keve, and Kadocsa and thousands of Huns were killed in battles against Romans. Attila (or Etele) was named as a King of Huns; he reigned from 434 to 453 AD. Attila's shield carried a coat of arms, a black bird with a crowned head on a silver field. This black bird was a hawk identified in *The Illuminated Chronicle* as turul, believed by Engle (2001) to be a significant link connecting the Huns and Hungarians. King Attila marched his army following the river Rhone and arrived in Catalaunum (in modern France) where he on June 20, 451 AD fought ten Kings of the West in

the Battle of the Catalaunian Plains (or Fields). As a result of this battle, many kingdoms feared Attila and paid taxes to him. One third of his army did not return back, stayed in Catalonia, and appointed their captains (or ispain) (modern name of Spain is from Ispain, Yspania or Hispania).

According to *The Illuminated Chronicle,* it was after the Battle of the Catalaunian Fields, in 451 AD, when one third of Attila's army did not want to return back, stayed in Catalonia, to form Yspania (Hispania, or Spain). Falconry was introduced to Europe by Huns (Vass, 2018). In 434 - 453 AD when Attila wore a *turul* bird [falcon] on his shield (by 1301 AD, twenty-eight Hungarian tribes declared they derived from *turul*). It is about this time (around 500 AD) when mosaics in Centrral Europe captured falcons and hunting dogs believed to be brought there by nomadic people from Asia (Wallis, 2017). King Attila stayed in Sicambria (in modern Germany) for five years and then proceeded towards the Adriatic Sea. After Attila's death in 453 AD, his sixty sons and fifteen thousand Huns went to Honorius (an uncle and the emperor of Greeks). One of them, Csaba, thirteen years later went back to Scythia, this road back took a year. According to *The Illuminated Chronicle* (Bak & Veszpremy, 2018), three thousand Huns went to Transylvania (Eastern part of the Carpathian Basin) where they called themselves Szekely and not Hungarians, and later settled closer to the mountains on the border with the Vlachs.

Sometime around 741–751 AD, the Hungarians left Scythia for the second time, and entered and settled in Pannonia for another six or seven years, before continuing their journey later on. According to Franklin (1996), Hungarians, who were "members of the Karaiakupovskii in Southern Urals," arrived in Europe in 862 AD (p. 84).

In 896 AD, Magyars arrived for the second time in the Carpathian Basin, to settle here for good. To celebrate their arrival a thousand years ago to the land that became modern Hungary, Hungarians held a Millennial celebration in 1896 (Kaplan et al, 2004). (The Kingdom

of Hungary extended over the whole of the Carpathian Basin and it was three times larger than the present country of Hungary. Until 1918 AD, it also included the present parts of Ukraine, Romania, Austria, Serbia, and Croatia.) Around 896 AD, Hungarians passed the White Cumans, Suzdal, Kyiv, and crossed the Alps and Carpathian Mountains, and arrived at Transylvanian city Szeben (Hermammstadt, today Sibiu). *The Rus' Primary Chronicle* [Rus is the former name of Ukraine], written in 1093 by the monk Nestor the Chronicler at the Kyiv Cave Monastery, dates the Hungarians passing Kyiv (or Kiev) to 888-898 AD, during the time of Oleg being in power (Cross & Sherbowitz-Wetzor, 1953; Iaremenko, 1990; Lunt, 1988; Zhukovsky, 1993). Magyars, who were "nomads like the Polovcians" arrived from the East and expelled the Vlakhs, took their land, and settled among the Slavs" (Cross & Sherbowitz-Wetzor, 1953, p. 8). According to Davidson (2018), this way of living was needed "to find new pastures for their herds" (p. 97).

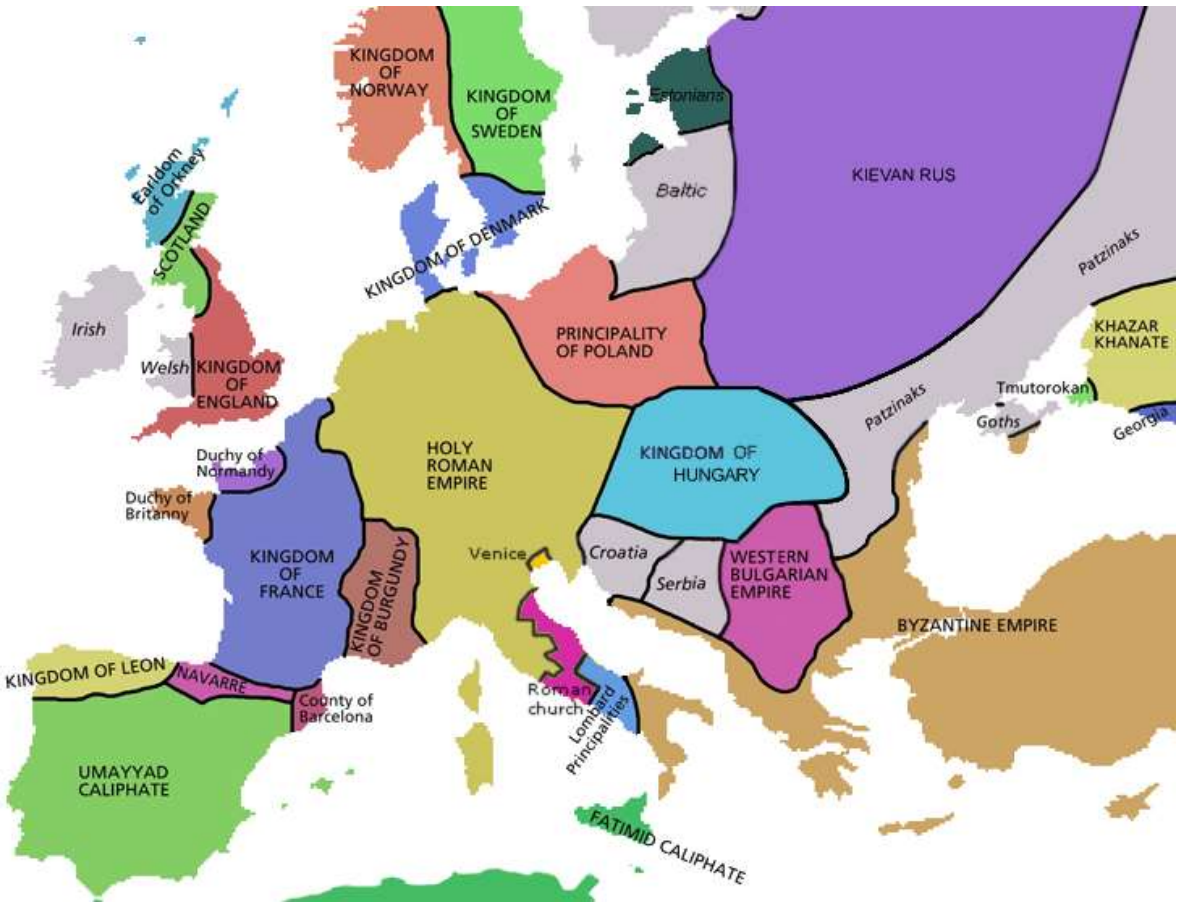
Transylvania had seven counties/ tribes, and they appointed their seven captains. Ancient Magyars were called Hetumoger (Het Magyar, or seven Hungarians, or seven Magyars); each had three thousand armed men. Csaba's grandson Almos (Almos begot Arpad) was one of the Dukes of the Magyars in the 9th -10th centuries. Almos' son Arpad was one of the seven captains; he took possession of the Danube region, over from the Duke Svatopluk (Svatopluk the Great) and Pannonian Slavs. According to Kurhajcova (2015), Duke Svatopluk achieved an independence of the land in 870, built the Svatopluk (or Moravian) Empire and believed to be be working on establishing of the National Christian Church independent from Rome and thought to be sharing the same mission with Slavic apostles and brothers Cyrill [Kyrill] and Methodius [Methodius] when Magyars arrived to the region and took over of Pannonia.

Arpad picked the Carpathian Basin land because of its fertile and rich soil, green grass, and with a river flowing through it. Arpad believed to "purchase" the land for a large horse, a golden saddle, and a golden bridle from the Duke Svatopluk, who accepted the gifts thinking

they were in exchange for his permission to settle on his land as peasants. Instead, he lost his land and eventually his life. This second entry of Pannonia by Hungarians led by Arpad marks the establishment of the Principality of Hungary, or later called Kingdom of Hungary, in the Carpathian Basin in 895 or 896 AD (Figure 9).

Figure 9

Map of Europe in 998 AD. (From https://commons.wikimedia.org/w/index.php?curid=756185). CC BY –NC.



After staying in Pannonia/ Kingdom of Hungary for six years, Hungarians entered Bohemia and Moravia, and then Carinthia. Then they stopped expanding for the next three years, invading Bulgaria later on (Figure 9). After another ten years of peace, Hungarians invaded Saxony and defeated the German Army, after another sixteen years, they proceeded to

invade Bulgaria and Greece. The Hungarians reached Constantinople (Greece) twice, in 934 and 959.

The Arpad (or Duke Arpad or Prince Arpad) was believed to be in power until his death in 907 AD (he was buried in the place of present day Budapest). His male descendants (Zoltan, Taksony, and Geza) followed his lead (Engel, 2001), becoming Dukes of Hungary.

The conversion to Christianity began around 975 AD, first by Prince Geza and then continued by his son Vajk who was given the name Stephen at his baptism. The Duke and later King St. Stephen (Tata) was, therefore, a great-grandson of Prince Arpad. A close connection between Rus'/Slavs and Huns/Hungarians is suggested by the presence of Cyrillic letters on the pouch of King of Stephen I, work of Slavic monks in the future Kingdom of Hungary, and the fact the Magyar tribes consisted of nomadic and local Slav men (Homza, 2020). The date of coronation of King St. Stephen remains disputed and is believed to be the Christmas Day on January 1st, 1000, or on January 1st, 1001, or on September 8th, 1000. King St. Stephen reigned for about four decades and died on August 15, 1038. It is under his leadership that Hungary was formed and the kingdom of Hungary remained in high power for over five centuries, until the 16th century when it was defeated by the Ottoman Empire.

In the 12th century Hungarians were called Pannons (or Pannonians) and Scythians (Engel, 2001). In 1241, during the King Bela IV (1235-1270) reign, an army of half a million Mongols and Tatars invaded Hungary and almost entirely destroyed the Hungarian army. The King himself escaped to the Adriatic Sea. The Mongols stayed in the country for three years and left Hungary in March 1242. The Turks were forced out of Hungary between 1683 and 1699, but the kingdom was fully restored only under the Austro-Hungarian monarchy in 1867.

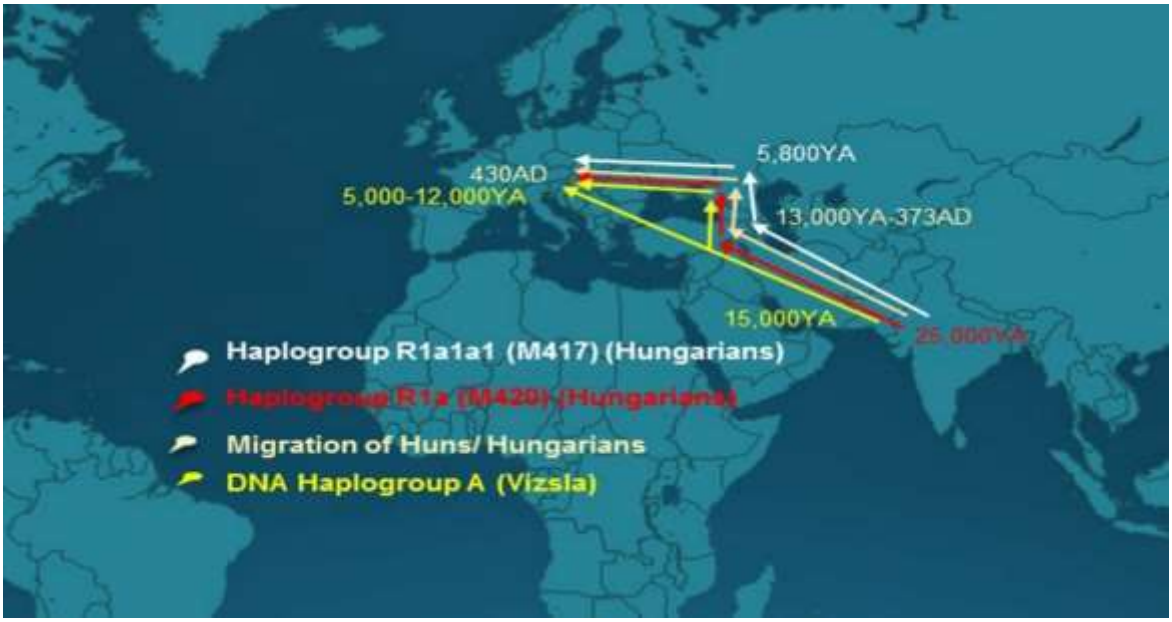
Migration Routes of Hungarian DNA

Asian Theory of Hungarians' Origins

Haplogroup R1 (M173) is an ancestral haplogroup found mainly in Eurasia; it is believed to originate in South Asia followed by a rapid diversification process (Semino et al, 2000). It is still found in 19% Armenians, 11% Azerbaijanians, and 38% Darginians (Nasidze, 2003), and in 14% Georgians (Semino et al, 2000). Haplogroup R1a (M420) (Figure 10), which is descendant from the R1 haplogroup, is believed to be approximately 25,000 years old and is tied to Northern India (Underhill et al, 2009) or Southern Russia (Eupedia). From Eastern Europe these tribes moved to Russia, Ukraine, and Poland and then to Hungary and Croatia, and later on – to Scandinavia (Underhill et al, 2009 & 2014). In the present time, more than 10% of males from South Asia to Central Eastern Europe and South Siberia carry this haplogroup (Underhill et al, 2010). R1a is believed to migrate directly from there to Mongolia and Eastern Europe and crossed the Caucasus during the Neolithic time (which started 12,000 years ago and ended 3,500 BC).

Figure 10

Simplified Map of the Migration Routes of Huns/ Hungarians and Their Dogs' DNA Haplogroups, O. Moshynska.



Notes: The migration route, from Indo-Pakistan, is highlighted in yellow (as suggested by a dog DNA haplogroup A) and splits in two possible routes to reach the modern Hungary region. However, only one of them is also accompanied by travel routes of migrating Huns/ Hungarians, human DNA haplogroups R1a and R1a1a1, as well as the Indo-European languages. Although the haplogroups continued to spread North and West and later to other continents, these routes are not shown on this simplified map. The breed migration mirrors human migration.

The haplogroup distribution pattern[1] suggests the Northern India-Caucasus/Georgia-Southern Russia/Ukraine/Belarus/Latvia/Slovakia/Poland-Hungary-Romania/ Austria/ Serbia/ Germany/Denmark-Finlad/Netherlands-Wales/Portugal R1a migration route. Haplogroup R1a1 (M198) is estimated to be 20,000 YA (Mesolithic times) and is believed to have originated in the present day Ukraine (Semino et al, 2000) or North-Western India (Wells et al, 2001). The distribution pattern[2] suggests the following R1a1 migration route: South India/South Pakistan-North India-North Pakistan-Hungary/Ukraine/Finland/Poland (Figure 10). Of special importance

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[1] *Haplogroup R1a (M420) (Figure 10) is common in Hungary (25.6%-29.5%), Croatia (24%), Romania (18%), Bulgaria (17%), Austria (19%), Serbia (18%), Denmark (15%), and Germany (16%), and even more common in Poland (57.5%), Belarus (51%), Russia (46%), Ukraine (44%), Latvia (40%), and Slovakia (41.5%) (Volgyi et al, 2009; https://youtu.be/FeMt-R_2wPA), with the highest frequencies found in Northern India (70-79%) (Sahoo et al, 2006). In comparison, R1a is very uncommon in Spain (2%), Wales (1%), Switzerland (3.5%), Finland (5%), France (3%), Italy (4%), Malta (3.5%), Netherlands (4%), and Portugal (1.5%).*

[2] *Haplogroup R1a1 (M-198) is found in Hungary (24.7%), Ukraine (28.1%), Poland (25.2%), Finland (35.3%) and it varies in India (from 25% in East India to 50.5% in South India), and in Pakistan (from 24.3% in North Pakistan to 47.5% in South Pakistan).*

though is R1a1a1 (M417) (Figure 10) haplogroup as it is estimated to occur approximately 5,800 years ago and is tied to Europe (Underhill, 2014 & 2015). One half of Hungarian males (varying from 50% to 24%, depending on the source and prior to removal of German and Slavic DNA) carry R1a1a human Y-chromosome DNA haplogroup, believed to be an Indo-European marker (Sandor & Steele, 2015). It is believed to have come from the Yamna Culture. Yamna Culture originated between the lower Don River, the lower Volga river, and North Caucasus 3,300 – 2,700 BC. Nomads lived there for farming, hunting, and fishing.

The J2 haplogroup is found in 6.5% to 22% Hungarians; this haplogroup is of the Middle East / Mediterranean origin and is believed to originate from Greek occupation of the Hindu Kush back in the 4th century, by Alexander the Great's army (Sandor & Steele, 2015). Hungarian's DNA also differs from other Uralic-speakers such as Estonians and Finns (Tambets et al, 2018). For example, 61.5% of Finns carry N haplogroup.

The R1b is the second most frequent haplogroup in modern Hungary (Volgyi et al, 2009). N1c (TAT), M253, N1c1 (M-178) were not detected in Hungarians (Sandor, 2015). Recently, another marker (Z280; Eastern Indo-European) that belongs to the R1a1a group was found in Hungarians, as well as in Central Asia (including in Kazakhstan and Uzbekistan), according to Sandor and Steele (2015) further supporting Hungarian legends about their Persian origin

European Theory of Hungarians' Origins

Engel (2001), however, disagrees that Huns and Hungarians were of common origin; he believes the Huns were the Asian people who disappeared before the end of the fifth century. Olazs et al (2018) have recently studied The King Bela III of Hungary's (1148-1196 AD) DNA. The mitochondrial DNA was found to be of haplogroup H1b, which is common (46%) in Europe; this is consistent with the historical facts that his mother was a daughter of the Prince of Kyiv. Researchers have identified the King's Y-chromosome DNA as R1a (Z93 branch and

Z2123>Y934 clade) and his mitochondrial DNA as H1b. This of special significance as the R1a1a1 (R-M417) haplogroup is known to further diversify into Z282 and Z93 (Underhill, 2014) and this is believed to have happened around 5,800 years ago. Z282 is prevalent in modern Europe while Z93 – in Asia. R-Z93 or R1a1a2 (R1a1a1b2) is most common in the South Siberian Altai region of Russia (30%), and less common in Kyrgyzstan (6%) and in the Iranian population (1–8%) (Underhill et al, 2014). These findings point towards the European origin of Hungarians. Studies of Csozs et al (2016) in agreement that the maternal genetic ancestry of Hungarians is mostly of European origin, settled in the Carpathian Basin between 10th and 12th century.

Dual Theory of Hungarians' Origins

Csosz et al (2016), based on comparison analysis of modern and ancient mitochondrial (maternal) DNA, conclude that Hungarians have a mix of West Eurasian and Central/North Eurasian roots. However, they acknowledge that Hungarians from the 10th century demonstrate connections with Central Asia.

Numerous Medieval era maps from various sources show Huns, Lombards, Slavs, Avars residing around the area of modern Hungary in 500-600 AD, with Lombards moving out of the area around 563 AD and Magyars moving in around 710 AD and 892 AD (https://www.timemaps.com/history/europe-500ad/, TimeMaps, n.d.; Thompson, 2011).

Manuscripts from the 14th century, *The Illuminated Chronicle, Livre de Chase,* Codex Albensis and others, all in agreement of Magyars', Huns', Slavs', and other tribes' whereabouts during the time of interest. Huns and Magyars mixed with Slavs in the Carpathian Basin. For example, the King Bela III the Great (1148-1198), who was an important ruler staying in power from 1172 to 1196 and consolidated Hungary's dominance over Northern Balkans, was the son of the King Geza II and the Queen Euphrosyne, the daughter of the Great Prince of Kyiv, Mstislav I (Olasz, et al, 2018).

Analysis of mitochondrial (maternal) DNA supports Hungarians' Central/North/West Euroasian origins (Csosz et al, 2016). At the same time, the analysis of Y-chromosome (parental) DNA points towards their Asian origin. This evidence points towards the dual origins of Hungarians.

Origins of Hungarian Language

Commonalities found between the Hungarian language and Sanskrit (Sandor, 2015) further support the Asian theory of Hungarians' origins. It was Zerjal et al (1999) who first established the connection between the R1a1a1 (M417) marker and the spread of Indo-European languages (Figure 10). Proto-Indo-European's Proto-Slavic-speaking group believed to move from Central Europe to the North-Eastern part of Europe during the early middle ages. Finno-Ugric tribes went North around 7,000-6,000 YA (Mirabal et al, 2009). According to Franklin (1996), Hungarians may be related to Khazars and are from the Karaiakupovskii culture in the Southern Urals and their languages is from the Finno-Ugric family of languages (p. 84). However, the official written language of multinational Hungary until 1844 was Latin.

There are believed to be the Avars, who like Huns, were nomadic horsemen breeding livestock. The generally accepted theory was that they spoke *Onogurus* (a form of Turkic and also was the language of early Bulgarians). However, Engel (2001) suggests that this could have been *Ongri* and thus Hungarian, given the fact that the *Ongri* was an early Slavonic name of Hungarians. DNA and historical records seem to support the theory that migrating Huns were the ones who brought their dogs, Vizsla ancestors, with them.

History of the Vizsla Breed

Origins of the Pointing Hunting Dogs

While most dog breeds are only 100-200 years old (Parker et al, 2017), other breed types have existed for much longer. The Roman writers of the 1st century mentioned the existence of dogs that were used to hunt birds with nets. One of the mosaics at the Villa of the

Falconer in Argos (Greece), dated to around 500 AD, shows a hunter holding by a leash both a falcon and hunting dog (Wallis, 2017). In addition, multiple graves found in Central and Western Europe and dated back to as early as the sixth century AD, included human, falcon, horse, and hunting dog remains, as well falconry equipment (Wallis, 2017). The falconry was introduced to Europe in 434-453 AD by nomadic people from Asia, who also brought with them hunting, or "hawk-dogs," dogs who were "used to scent, point and flush game for falconry birds to chase" (Vass, 2018; Wallis, 2017, p. 2). The Bavarian Laws (completed by 756 AD) describes fines for stealing the "hapuhhunt" or "hawk-dog" (p. 6). Adams (2015) confirms that hunting dogs, trained to hunt with hawks, were preserved and protected in 5th-7th century Europe (region currently corresponding to France, Denmark, and Hungary), with the images of hunters and their prey picking up in the 6th century.

Falconry has made a great contribution to the development of pointing dogs and mastery of the hunting game overall. De Almeida (2021) believes those hunter-hawk-dog teams who mastered the Observe-Orient-Decide-Act (OODA) Loop approach were the ones successful in their hunting efforts.

The territory where these dogs were seen was part of Scythia's territory (*Map of Europe in 998 AD*) that extended in Europe as far as Gades [Cadiz in Spain]. Scent hounds are believed to have been selected early in Medieval times. These dogs also happened to have long drooping ears; such shape of ears believed to help with maximizing the smell uptake and minimizing the hearing while on scent (Rogers, 2005). Similar to humans selecting dogs with curly tails (an early mutation that occurred by chance during the dog domestication), in this instance those dogs with drooped ears were selected instead. Later, such scent hounds with longer muzzles and drooping ears were further specialized into bird pointing dogs.

People have started the selection process and breeding practices early. In 1487, there were at least fourteen different breeds in Europe (St. Albans Press, 1487). First images of

hunting with dogs as well as description of hunting scenes appeared around 600-650 AD (Chronica de Gestis Hungarorum e Codice Picto Saec, 1358). A Sasanian metal bowl, dated to the later sixth or seventh century, is of the greatest significance (Adams, 2015). This medieval Persian art, which is picturing game animals including a falcon, duck, horse, and dog, was among objects from Sutton Hoo royal burial site in Suffolk, England. These dogs with “smooth-coated hounds with deep chests and long tails” (p. 46) pictured with game animals may be the earliest indication of breeding of hunting dogs.

The art of hunting is believed to originate closer to the end of the 7th century (Kellerhoven, 1872). The first Emperor of Romans Charlemagne “never missed an opportunity to hunt” (p. 194). First hunting rules (e.g., for deer-, hare-hunting) were first captured in the 13th century in the Lirre duroy Mndiis by an anonymous author, but believed to be fully captured and described by Gaston Phoebus in the 14th century. Even though hunting with hounds was not invented by the French, because it was first described by them, hunting with hound dogs became known as French hunting (Kellerhoven, 1872). For example, a chromolithograph showing the 8th century party of Saint Hubert’s sisters hunters with horses and dogs (Kellerhoven, 1872; Thompson, 2011). These sister hunters were invited by kings and lords for “magnificent and pompous” celebrations of the Saint of the Hunt (Kellerhoven, 1872, p. 200).

According to *The Illuminated Chronicle* written in 1358 (Bak & Veszpremy, 2018), around 600-650 AD, future Huns/Magyars went hunting with their dogs, got lost, and eventually found the place “suited for feeding herds” (p. 15).This land was near the sea (in the Meotis region near Persia), and was rich in grass, water, fish and birds. They stayed on this land for five years. During this period, they met Bulgarians and they dwelled together. Based on the Hun-Hungarian identity theory (Bak & Veszpremy, 2018), Magor and Hunor kidnapped daughters of Prince of the Alans and made them their wives, starting “the Magyars and the Huns” (p. 13). When they crossed the Alps and passed Kyiv (Ukraine) in 898 AD, they arrived in

the Danube region where they decided to settle for good. When in 898 AD Duke Svatopluk realized his land in the Danube region was taken away from him by Arpad and his army, he proposed to him to throw away the gifts, and kill the horse and feed it to the dogs: “If you kill the horse, you will give food for their dogs; if you toss the bridle on the field, their men will find the gold of the bridle when they mow the hay; if you throw the saddle into the Danube, their fishermen will lay out the gold of the saddle upon the bank and carry it home” (*The Illuminated Chronicle*, 1358). Magyars/Huns indeed brought their dogs with them. Later, Magyars and Huns mixed with Slavs, who lived in the region, to become ethnic Hungarians.

Edward, Second Duke of York, translated the *Livre de Chase* of Gaston Phebus’s manuscript from the late 14th century known as *The Master of Game* (Baillie-Grohman, 1909). He described the general process of the development of scenting pointing dogs as the dogs with hanging ears and good scenting abilities who followed their masters (Rogers, 2005). Later, the pointers were bred to specifically point their bodies towards the birds and freeze. At first, these bird dogs were used to hunt with hawks/falcons, then with nets (hunters dropped a net over both the birds – partridges and quails - and the dog), then with crossbows (Arkwright, 1902), and later, when firearms were developed, flintlock in the mid-16th century and muzzleloader rifles in the late 17th century (Arkwright, 1902). King Louis XIV, Louis The Great, the King of France (1638–1715) had a hunting staff that included 115 men, 250 horses and 300 couple of hounds (Rogers, 2005). England, however, did not see pointing dogs until the 16th century. Scent hounds and spaniels were used instead to hunt birds. George Turbervile (1611) in his *Book of Falconrie or Havvking* describes bird dogs who hunt without interfering with handlers:

“In roysting wise about they range, with cheerful chappes to ground,
To see where in the champion may some lurking fowle be found.
A sport to view them stirre thir sternes, in hunting too and fro” (p. 3).

Origins of the Vizsla

First Images and Descriptors of the Vizsla

Hounds, some of them Vizsla-like, deep-chested and golden-colored, appear in the art that reached present days as early as in the 8th century, based on a chromolithograph showing the party of Saint Hubert's sister hunters with horses and dogs (Kellerhoven, 1872; Thompson, 2011). A pencil drawing believed to be of a Vizsla pointing at a rabbit sitting under a tree appeared in *Codex Albensis*, Hungarian manuscript dated 1100; it is currently kept in the University Library of Graz (Vigyazo-Walker, 2015) (Figure 11).

Figure 11

A Vizsla Pointing a Rabbit, From ninehungariandogs.org, Vigyazo-Walker, 2015. Reprinted with permission.

Every time Magyars and Huns moved, they brought their horses, arms, and dogs with them. *S*ome of these dogs look like Vizslas, being yellow-/brown-colored, smooth-haired, and with drooped ears and long tails. Hunting with hunting dogs mentioned several times in *The Illuminated Chronicle*, with first descriptions appearing as early as in the 11th century (Bak & Veszpremey, 2018). In around 1095, King Ladislas was advised by an angel on where to build a monastery while hunting on the river Kris. Hunting with falcons is captured in the scene describing Duke Almos hunting in the Bakony in 1106.

Of interest is the image from the *The Illuminated Chronicle* manuscript's chapter called *Generatio Hunt et Paznan Early* (Bak & Veszpremey, 2018) picturing the nobility holding a banner and tournament shield with a picture of the dog's head on his shield (Figure 12).

Figure 12

Image from The Illuminated Chronicle Pictures the Nobility from Early 11th century (1001/1002) Holding a Banner and Tournament Shield with a Picture of the Dog's Head on his Shield, *https://web.archive.org/web/20120304111134/http://konyv-e.hu/pdf/Chronica_Picta.pdf*

CC BY –NC.

According to Bak and Veszpremy (2018), 'Hunt' is from 'Hund' meaning "dog," "In those days there also came Hont and Razmany, who at the river Hron had girded King St. Stephen with sword…" Based on the description of the King St. Stephen' girding, authors identified the time as being in the early 11th century (1001/1002) (Bak & Veszpremy, 2018). The first images of coats of arms (helmet crests) appeared around the 1230s under King Bela IV (Geary et al, 2018). As per Studies on *The Illuminated Chronicle*, coats of arms identify the important

historical figures for a millennium and reflect the heraldry of the kingdom (e.g., silver on red in this instance). According to Rogers (2005), scent hounds and Greyhounds, however, were the only dogs that were found on the coats of arms.

Figure 13

Image from The Illuminated Chronicle Displays Four Different Hunting Breeds, With At Least One of Them Looking Like a Brown Vizsla-like dog.

https://web.archive.org/web/20120304111134/http://konyv-e.hu/pdf/Chronica_Picta.pdf

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In the manuscript's chapter called *De Constructione Ecclesie Demes* includes an image of people mounted on horses observing a falcon and a crow. There is also a dog described as a hound (Bak & Veszpremy, 2018) (Figure 14).

Figure 14

Image from The Illuminated Chronicle shows people mounted on horses observing a falcon and a crow. There is also a dog described as a hound.

https://web.archive.org/web/20120304111134/http://konyv-e.hu/pdf/Chronica_Picta.pdf CC BY – NC.

It was thanks to King Louis the Great (1342-1382) who ordered *The Illuminated Chronicle* (currently located in the National Library in Budapest) be written to summarize Hungarian history until 1330 AD. Nobles cared about their dogs and King Louis was known by his passion for hunting and his devotion to dogs. He was portrayed with his Greyhounds who the legend told he demanded to be bathed twice a week and were allowed to share a bedroom with him. He rebuilt several castles and palaces (the castle Gesztes at Diosgyor near Bukk mountains, the castles at Lupca, Viglas and Zvolen, in forest of Zvolen) where he liked to hunt with his dogs (Engel, 2001). Up to the end of the 15th century, the Hungarian kings spent most of their time hunting in the mountains on the royal hunting lands. The most popular were

Damasd in the Borzony (starting in 1339), Zvolen (beginning in 1340), Diosgyor in the Bukk (beginning in 1343), and Gerencser in the Vertes (beginning in 1362) (Engel, 2001).

The year 1358 is believed to be the first time when brown hounds are described and colored images of a brown Vizsla-like dog appear. *The Illuminated Chronicle* (formerly known as *Vienna Chronicle*) is an illustrated (containing 147 pictures) manuscript of the early codes and laws dating 1358, during the time of King Louis I (1342-1382) of Hungary (Bak & Veszpremey, 2018). It is believed to be the most complete record of medieval history of Hungary, going back to the 11th century. A Vizsla is found on one of the 14th century Gothic panels in the Esztergom Christian Museum (Hungary) (Boskovits et al, 1965) (Figure 14). In 1435, Gerard, Duke of Cleves and Burgrave of Ravensberg, created the order of the Knights of Saint-Hubert, in honor of Hubertus or Hubert (656 – 727 AD), a Christian Saint becoming the first bishop of Liège in 708 AD, who was a saint for hunters and mathematicians. The chromolithograph shows ladies hunters with their deep-chested hunting dogs, many of them Vizsla-like (Kellerhoven, 1872, p. 201; Thompson, 2011, p. 91).

Figure 15

The 14th Century Gothic Panel in the Keresztény Múzeum Shows a yellow Vizsla (Smooth). Photograph by Attila Mudrák (2020). Reprinted with permission.

Figure 16

The Vizsla from the 14th Century Gothic Panel (A) closely resembles a modern Vizsla (B). A - Photograph by Attila Mudrák (2020). Reprinted with permission. B – Photograph by Oksana Moshynska (2021).

A.

B.

The Chronicle of Hungarians (right from the first pages of *The Illuminated Chronicle*) includes descriptions of hunting with dogs scenes. One of the first manuscript's chapters called *Prima origo dilationis Hungarorum in oriente Scythie* portray a hunting scene with two groups of hunters dressed as 14th century knights holding several hounds with at least one of them having close resemblance to a Vizsla, and a bear (Chronica de Gestis Hungarorum e Codice Picto Saec, 1358) (Figure 17).

Figure 17

A hunting scene from the 14th century includes a Vizsla-like dog (Bak & Veszpremy, 2018).

https://web.archive.org/web/20120304111134/http://konyv-e.hu/pdf/Chronica_Picta.pdf

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According to the Hungarian Vizsla Society, "the Vizsla was an established and recorded breed at least 300 years before the Nobles of the Courts of Weimar set out to develop the

Weimaraner around the year 1810, or before the first English Pointers were introduced into the Hungarian Kingdom in the year 1880" (n.d.). This timing aligns well with the 1563 AD personal correspondence from Janos Gyulai to Kristof Batthyani, "We know that your Honor possesses smaller sized hawks. Don't leave us without one or two of them. And do send us please a bird-chasing Vizsla too." ("Sed et canem odoranium vulgo fyrejre valo Vizslath nobis dare velli.") (The Hungarian Vizsla Society's archives).

Arkwright (1902) describes Gaston Phebus, the famous owner of more than 1,500 dogs collected from various European countries, who (in France) in 1387 AD had "smooth-haired", "falcon-dogs (*chien d'oisel*)" (p. 11), and they were "very faithful to their masters" (p. 7), went "in front of birds willingly" (p. 7), specializing in the partridge and the quail and were used to hunt with "goshawk or falcon, lanner or tassel-hawk" (p. 7). "For the man who has a good goshawk or falcon, lanner or tassel-hawk, and a good sparrow-hawk, they are very useful, and also when one teaches them to set their game they are good for taking partridges and quail with the net; they are also good, when broken to the river, for a bird that is diving…" (Arkwright, 1902, p. 7). Some of these dogs were of "cinnamon color (*canele*)" (p. 7).

Therefore, the existing evidence dates the origins of the Vizsla (Smooth) to at least the 14th century, if not earlier.

Historical and Cultural Evidence of Selective Breeding of the Vizsla Breed

The 9th and 10th century burial sites examination showed the Hungarians had different classes: nobles, warriors, with simple warriors forming a "middle class", and "commoners". Commoners were governed by warriors who in turn were governed by a small group of nobles. The examination of words proved that Hungarians were well advanced in stock-breeding of cattle, sheep, goats (references to ox, bull, calf, sheep, ram, wool, goat, pig), dairy farming (references to cottage cheese and buttermilk), agriculture (references to harvest, wheat, barley, hemp, bran, apple, pear, nut, fruit), wine-making (references to wine, grape, filter), and about

animal husbandry (Engle, 2001). Though the medieval peasants were allowed to hunt alongside nobles, beginning as early as in the 15th century, the Hungarian monarchy prohibited common people from hunting deer, rabbit, boar, and pheasant (Engel, 2001). This was the first step to make hunting a noble privilege. The Kingdom of Hungary was built on feudalism; hunting continued to be a chief sign of status for the aristocracy. At the same time, different dog breeds (types) were extremely important in agriculture for the common people. The fact that there is no genetic connection between hunting and herding dogs (Talenti, 2018) supports early dog selection / breeding practices in the 16th century or even earlier. Most likely, earlier, as main types of dogs (e.g., herding, guard, and hunting) appeared as decorating motifs on lyres from 6th or 7th century (Whitfield, 2012). Similar to higher castes prevented from marrying common people, hunting dogs were the privilege of the noble caste (as opposed to herding dogs that were owned by the agricultural caste). By the mid-15th century, there were at least 20,000 noble families, approximately 3.5-4.5% of the entire population (Engel, 2001). Such noble privilege practices continued for centuries. In fact, such practices could have started much earlier. For example, in the 9th century, Hungarians practiced a religion based on Vedic-Hinduism and had five castes (warriors, priests, merchants/agricultural, laborers, and common people); the mixing of blood lines (genes) was strictly prohibited (Sandor, 2015). Studies of *The Illuminated Chronicle* (2018) explain how “clothes maketh the man” belief was in place in 14th century (Bak & Veszpremy, 2018).

The Vizsla Predecessors

Oldest, originated approximately 2,500 years ago during the Thracian period (Marinov *et al*, 2018), hunting dogs believed to have Central Europe origin (Marinov *et al* (2018). Hunting was among the first desired traits during dog domestication (Parra et al, 2007). The oldest hunting breeds believed to be the Greyhound, Transylvanian (Hungarian, Scent) Hound, Smooth-Haired Siberian Hound (Tricolor Hound), Greek Harehound, Bloodhound, Magyar Agar,

and Vizsla. Among Vizslas' suggested ancestors, the following were named: the Turkish Yellow Dog, Greyhound, Old Spanish Pointer (now extinct), Pannon (or Pannonian) Hound (now extinct), and Magyar Agár (Boggs, 2000; Coffman, 1991; Gottlieb, 1992; Koshyk, 2011; Lamb, 2007 & 2015; Hungarian Vizsla Club., n.d.). The Portuguese Pointer, Sloughi, Indian Pariah Dog, Hertha Pointer and Azawakh should be looked at as potential ancestors as well. However, the English Pointer and Irish Setter are unlikely candidates. In 1880, Zoltan Hamvay and Julius Barczy De Barczyhaza purposely introduced the English Pointer and Irish Setter into the Vizsla breeding program; these gentlemen kept the stud books proving these breeds were introduced later on (Gottlieb, 1992).

Some breeds, however, such as the Redbone Coonhound, Weimaraner and Rhodesian Ridgeback are often mistaken for Vizsla. Despite a similar physical appearance, there was no evidence found to confirm that the Weimaraner, and/or the German Short-Haired Pointer were ever used in the Vizsla breed history (Gottlieb, 1999). One of the most recent studies (Talenti et al, 2018) reviewed 182 breeds of 16 wild canids and concluded that the breed(s) formation occurred mainly through convergent and divergent selection. They have identified that in addition to Continental, United Kingdom Rural, and New World, there is another clade – the 'Hungarian' clade (to include the Puli, Pumi, Komondor and Kuvasz). The authors (Talenti et al, 2018) have concluded that the physical similarity of the breeds in Hungary (the Kuvasz and the Komondor) and Sardinia (the Fonni's Dog) was the result of the convergent selection (the process by which unrelated breeds develop similar traits). This was opposite to the mainland Italian peninsula, Alps, and Pyrenees mountains of France and Spain when the transhumance was found to be the main factor (Talenti et al, 2018). Similarly, the convergent selection may for example explain a similar physical appearance of the Weimaraner and the Vizsla (Smooth).

Turkish Yellow Dog

Turkish Yellow Dog (*https://www.dogbreedinfo.com/t/turkishyellowdog.htm*) is now extinct and though believed by some Vizsla historians to be one of the Vizsla's ancestors (Lamb, 2007 & 2015), little is known about this ancient breed to prove or reject this theory.

Greyhound

The Greyhound believed to originate in Ancient Egypt possibly crossed the Alps and moved with Celtic tribes to Southern Europe around 1st century BC and thus potentially may be an ancestor of the Vizsla. However, the genetic study (Talenti et al, 2018) found no connections between the Italian and Hungarian flock guardian breeds. The Italian (flock guardian) breeds found to have ancestors from Northern Africa (the Sloughi and the Azawakh) and the islands of Malta (the Pharaoh Hound) and Ibiza (the Ibizan Hound), suggesting Italian breeds may have had different from the Hungarian dogs migrating routes. Thus, it is unlikely that the Greyhound is one of Vizsla's ancestors.

Figure 18

Italian Greyhound. Original from the public domain. (From https://www.publicdomainpictures.net/en/view-image.php?image=19436&picture=greyhound.) In the public domain. CC BY –NC. Edited by Oksana Moshynska.

Portuguese Pointer

The Portuguese Pointer (Figure 19) which is traceable back to the 12th century and originated in Portugal (Portugal was part of the Scythia territory that was occupied by nomadic people from 11th century BC until 2nd century AD). Huns stayed in Scythia until 373 AD. There is insufficient scientific knowledge to completely reject the theory about this breed being one of the Vizsla's ancestors.

Figure 19

Portuguese Pointer. (From https://www.publicdomainpictures.net/en/hledej.php?hleda=portugese+pointer.) In the public domain. CC BY –NC. Edited by Oksana Moshynska.

Bloodhound

The Bloodhound, or the Schweisshund, (Figure 20) originated in Belgium or France, is believed to be introduced into the Vizsla breed (Gottlieb, 1992), with the purpose to improve the

scent tracking ability. Similarly to the English Pointer and/or the Irish Setter, the Bloodhound, if ever, was introduced into the Vizsla breed program later on, in the 19th– 20th centuries. The Bloodhound is unlikely an ancestor of the Vizsla.

Figure 20

Bloodhound. (From: https://www.publicdomainpictures.net/en/hledej.php?hleda=bloodhound.) In the public domain. CC BY –NC. Edited by Oksana Moshynska.

Sloughi

Another breed of interest is Sloughi (Figure 21) known to hunt with Egyptian nobles and nomads and accompanied Hannibal during the 218 BC Alps crossing on the way to Europe. Sloughi has genetic similarities with the Basenji. However, there is no evidence found of genetic similarities with the Vizsla, making it highly unlikely for this breed to be an ancestor of the Vizsla.

Figure 21

Sloughi. (From https://www.publicdomainpictures.net/en/hledej.php?hleda=Sloughi.) In public domain. CC BY –NC. Edited by Oksana Moshynska.

Indian Pariah Dog

Indian Pariah Dog (Figure 22), landrace dog from South Asia, is considered a primitive breed together with the Canaan Dog and the Basenji. There is no published evidence to link this breed to the Vizsla.

Figure 22

Indian Pariah Dog. (From https://www.publicdomainpictures.net/en/hledej.php?hleda=Indian+Pariah+Dog.) In the public domain. CC BY –NC. Edited by Oksana Moshynska.

Azawakh Dog

Azawakh Dog (Figure 23), originally from West Africa, is a sighthound, and the majority are sand or dark fawn, brown and red in color, with white on its feet and with white on the front. It is believed to originate from the Pariah Dog/ Basenji and has a distinct genetic signature that is closer to the Fox, the Jackal, and the Italian Wolf than to other sight hounds. There is no evidence to support the Azawakh Dog is linked to the Vizsla. The migration routes of Hungarian tribes provide additional evidence against this linkage.

Figure 23

Azawakh Dog. (From https://www.publicdomainpictures.net/en/hledej.php?hleda=Azawakh+Dog.) In the public domain. CC BY –NC. Edited by Oksana Moshynska.

Old Spanish Pointer

Old Spanish Pointer or Perro de Punta Español (now extinct) (Figure 24) was a landrace breed believed to be an ancestor of most pointing dogs (Arkwright, 1902; Parra, 2008).

Figure 24

The Old Spanish Pointer by an unidentified artist; The Hermitage via Antikvariat.

(From https://commons.wikimedia.org/wiki/File:John_Buckler_-_The_Spanish_Pointer_-_Google_Art_Project.jpg.) In the public domain. CC BY –NC.

The (Old) Spanish Pointer was first mentioned in writing in the 18th century (Arkwright, 1902). (Previous references (in 15th 16th century) were to the Navarrese Partridge Dog.)

The analysis of mitochondrial, autosomal and Y-chromosome DNA confirmed the theory that the Old Spanish Pointer was an ancestor of the English Setter (Parra et al, 2007). The Long-Haired Old Spanish Pointer male was in the 19th century crossed with the English Setter, English Pointer, and English Spaniels, to come up with the Epagneul Breton and modern 22 Spaniel breeds (Parra et al, 2007). The Short-Haired Old Spanish Pointer was taken to central Europe, mixed with local dogs, to create a German Short-Haired Pointer (Parra et al, 2007). Genetic studies confirmed that the Old Spanish Pointer was an ancestor of the English Pointer, English Setter, German Shorthaired Pointer, Epagneul Breton, Deutsch Drahthaar, and French Brittan (Parra et al, 2018). However Parra et al (2018) did not identify the Vizsla as one of the

Old Spanish Pointer's descendants. According to Hochwalt (1922), the Spanish Pointer was "a large unwieldy dog, with heavy head, immense dewlap and deep flews; large all over and very slow in action" (p. 15). It becomes evident the Vizsla breed most likely did not originate from the Old Spanish Pointer.

English Pointer

The earliest pencil sketch of the Pointer, found by Arkwright (1902), was done by Pisanello, an Italian who lived between 1380-1456, compared to the earliest pencil sketch of the Vizsla which was dated in 11th century (Vigyazo-Walker, 2015*)*. Interestingly, the Pointer's head that Pisanello (Vittore Pisano, 1380-1446) drew was of a light-colored pointing dog with a narrow head and orange eyes and flesh-colored nose (Arkwright, 1902) that appears to be looking like a Vizsla. Arkwright (1902) found that the earliest Pointer with a darker nose first appeared on the oil painting by Oudry (1686-1755). Before that, it appeared to be of the pale fawn color with low-set ears and thin tail. Another Pointer on the 1834 engraving by Richd. Based on genetic evidence, the English Pointer was established from the Short-Haired Old Spanish Pointer in 18th - 19th century (Parra et al, 2007) and was introduced into the Hungarian Kingdom in 1880 (Hungarian Vizsla Society, n.d.). It shares the maternal ancestor with the English Setter and German Short-Haired Pointer (Parra et al, 2007). There is no evidence, however, identifying the English Pointer as one of the Vizsla'a ancestors.

Hertha Pointer

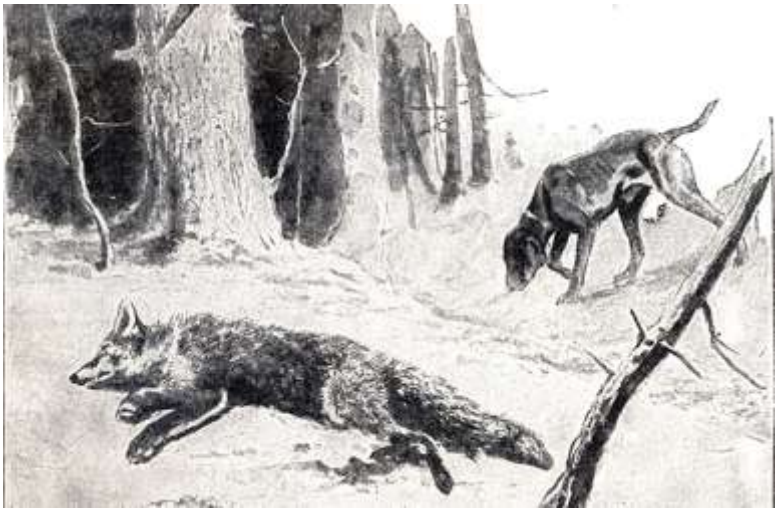
Hertha Pointer is unlikely a Vizsla ancestor as it is believed to develop around 1864 in Denmark (from the Duke of Augustenborg's kennel) from the English Pointer (Hancock, 2013).

Transylvanian Hound

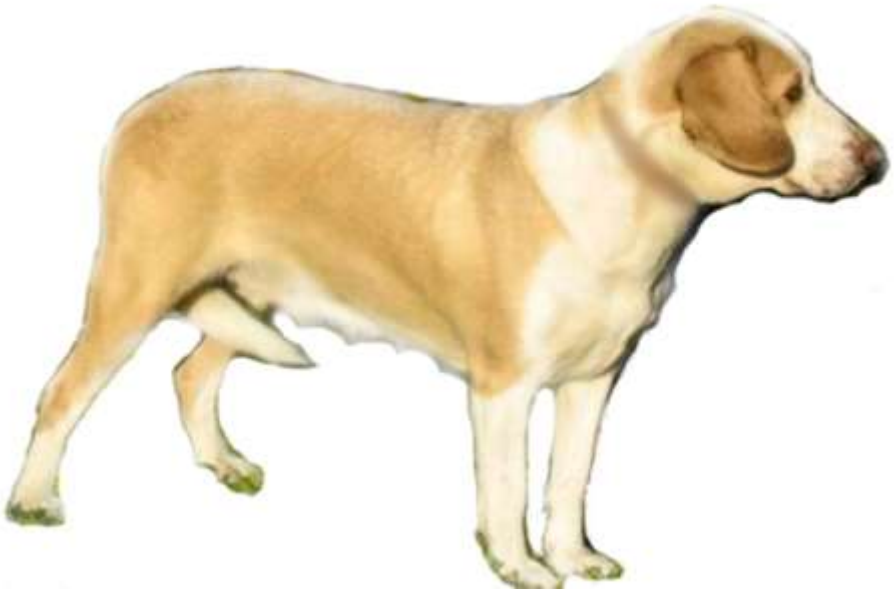
Transylvanian (Hungarian) Hound (Figure 25) is believed to be the result of the crossing of the Magyar Sighthound (or Magyar Agar) and the Pannon Hound (Hungarian ancient native dog) that occurred approximately thousand years ago.

Figure 25

A.*Transylvanian Hound or Hungarian Hound or Erdélyi Kopó or Pannon Hound, Vigyazo-Walker, 2015. (From http://ninehungariandogs.org/.) Reprinted with permission.*



B.*Transylvanian Hound. (From https://www.google.com/search?q=transylvanian+hound+public+domain&ei.) In the public domain. CC BY –NC. Edited by Oksana Moshynska.*



Transylvanian Hound dates back to the 10th century (Vigyazo-Walker, 2015), suggesting that the Vizsla and Transylvanian Hound may have the same predecessor.

Magyar Agar (Hungarian Greyhound)

Magyar Agar (Figure 26) is sought to arrive to Europe with tribes as early as in the 9th century (Hennessy, 2016; Vigyazo-Walker, 2015). It was crossed with the ancient native dogs (e.g., Pannon Hound) of the area.

Figure 26

Magyar Agar or Hungarian Sighthound. From https://www.google.com/search?q=magyar+agar+public+domain&client.) In the public domain. Edited by Oksana Moshynska.

Magyar Agar is believed to originate from the Greyhound and Borzoi. Interestingly, the Borzoi and Vizsla share the common Y-chromosome haplotype H1a8 (Shannon et al, 2015), combining these two breeds into the same Y-haplogroup network and further supporting the

theory of the Magyar Agar possibly being one of the male ancestors of the Vizsla. The Magyar Agar was (re)-introduced into the Vizsla breeding program in 1731 by Zay family of Zaycegroe program. The Zay family, known for their breeding and training of gun dogs, believed to apply their knowledge to create a modern prototype of the Vizsla (Gottlieb, 1999). Therefore, analysis of ancient DNA samples of the extinct dog breed remains and their comparison to the DNA samples of modern breeds would help proving or rejecting this theory.

Pannon Hound

Pannon Hound is also known as Pannonia Hound. Huns made their first entry into Pannonia in 373 AD and then again – in 895 or 896 AD. Therefore, the mix of the Pannonia Hound and the Magyar Agar potentially could occur as early as in the 4th century. The separation of the Vizsla breed (and the Transylvanian Hound), was most likely completed by the 12th-13th century. The first written word “Vizsla” appeared in the 1300s (Hungarian Vizsla Club’s archives), aligning well with this period.

Likely Vizsla’s Ancestors

Therefore, the historical evidence (e.g., migration routes of Hungarian language and people, *The Primary Chronicle (*or *Povist’ Vrem'ianykh Lit of Kyiv Rus,* which is a modern Ukraine*)* in 1093, *The Illuminated Chronicle* written in 1358) and genetic findings (e.g., human and canine DNA haplogroup analysis of both the mitochondrial and the Y-chromosome) support the original claim of the Hungarian Vizsla Club stating that the Pannon (or Pannonia) Hound was the original ancestor of both, the Vizsla and Hungarian (Transylvanian) Hound. The Magyar Agar, another Vizsla’s ancestor, arrived with Hungarian tribes and was mixed with the ancient native Pannon Hound.

Although modern breeding practices have only been introduced in the last few centuries (Larson et al, 2012), the Vizsla is believed to have preserved and accompanied the early warlords and barons, the land-owning aristocracy, for centuries. According to Hochwalt (1922),

in 1872, “years before the days of stud books and authentic registrations, many an estate had its own strain…, and in some instances they were as pure as in the later days, for private records were kept which enabled the owners of these strains to breed intelligently” (p. 65). He claims “blue-blood lines” of bird dogs were created back then (p. 74). Even earlier, in 1754 (Arkwright, 1902), “according to the laws the following dogs were distinguished: blood-hounds (leithunde), boarhounds (batzbunde), and partridge-dogs (bunerhunde)”, or “game-bird dog” (huuerhuud or agutarito) (pp. 3-4). Dukes of Hamilton’s pointers were “of the best, - their purity of blood being most jealously guarded” (Arkwright, 1902, p. 58). Arkwright, 1902 found the references about partridge-dogs in 13th century literature, describing dogs “with falling ears, which know of beasts and birds by the scent…, therefore they are useful for sporting” (p. 6). As per the Hungarian Vizsla Society’s records, early in the 19th Century, Zolton Hamyay (landowner of the county Gomor) and Istvan Barczy de Barczihaza (landowner and Cabinet Councilor) established Magyar Vizsla’s purebred records in the form of a studbook (Vizsla Timeline). Embark (n. d.) concurs that Vizsla became recognized by its hunting abilities by the 1800s.

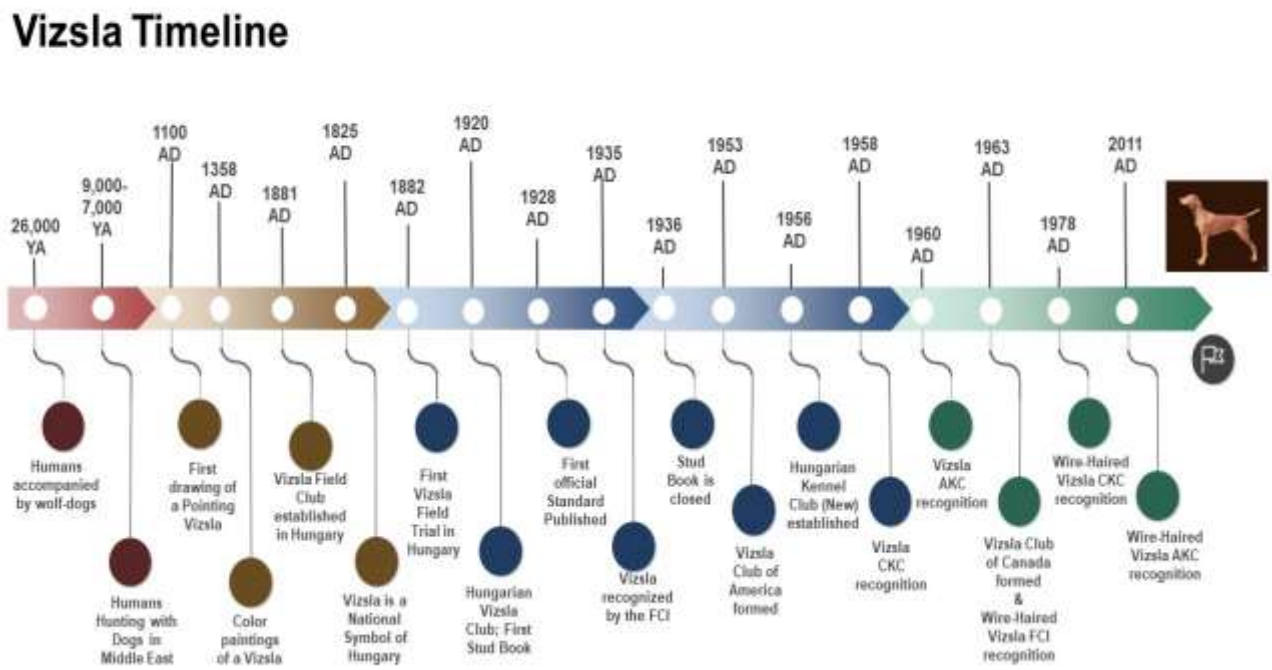
Crafts and symbols were sought to develop a national consciousness (Kaplan, 2004); the Vizsla breed was one of them. In 1825 AD, Vizsla was named the National Pointer of Hungary; this further helped Hungarians to preserve the breed.

Based on the currently available information, here is how the Vizsla timeline looks like (Figure 27). In 1882, the first Vizsla field trial was held near Budapest in Hungary (Coffman, 1991). Between the 1880s and 1920s, Vizslas were widely used for hunting. In 1920, the first official stud book for pureblood Vizslas was registered in Hungary. In 1924, the first Hungarian Vizsla Club (Oriszagos Vizsla Club) was formed with the purpose to restore the breed (Gottlieb, 1992). In 1922, drawings by Carl Emil Diezel's Apróvad Vadászat showed a Vizsla hunting barious game (e.g., rabbit, deer, fox). In 1935, the breed was recognized by the Fédération

Cynologique Internationale (FCI). In 1958, a few decades later, it was recognized by the Canadian Kennel Club (CKC) and, in 1960, by the American Kennel Club (AKC).

Figure 27

Timeline of the development of the Vizsla. By Oksana Moshynska.



In the mid-1930s, the Wire-Haired Vizsla was developed by crossing the Vizsla (Smooth) with the liver-colored German Wire-Haired Pointer, with puppies bred back to Vizslas (Smooth), to preserve the yellow color of their coat (Canadian Kennel Club, n.d.). Initially, by Vasas Jozsef (Csabai Vizsla kennel) and Gresznarik Laszlo (de Selle German Wire-Haired Pointer kennel) and with a purpose to develop a Vizsla dog with a larger frame and a heavier coat, for working in colder weather conditions. Interestingly, the Vizsla (Smooth) bitch used for this breeding may have carried a long-hair gene as her sire was known to have long-haired offspring. It is believed (Lamb, 2015), the Irish Setter, the Pudelpointer, and the Hertha Pointer were also used (later

on) in the Wire-Haired Vizsla breed program. The Wire-Haired Vizsla was recognized in Hungary in 1950, and recognized by FCI in 1963 and by CKC in 1978, abd by AKC in 2011.

Today, both breeds, the Vizsla (Smooth) and Wire-Haired Vizsla, receive well-deserved recognition around the globe (Figure 28).

Figure 28

Postal stamps with images of modern Vizslas across the World. By Oksana Moshynska, personal collection.

The rise of the Vizsla in the modern days was possible due to great dedication of breeders and the breed supporters. The Vizsla history mirrors the history of their people. The Vizsla as we know it goes back in time, around the 11th century, when Magyar Agars followed

their people and mixed with Pannonia Hound in the Carpathian Basin, eventually becoming the Vizsla breed. As new modern technologies develop, one day we might be able to resolve the remaining puzzles, fill in the gaps, and further clarify the Vizsla breed timeline. The Vizsla history is complicated and fascinating. The author has learned many stories hoping to share them in her next papers.

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